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IN THE

Supreme Court of the United States

October Term, 1906.

COMPUTING SCALE COMPANY OF AMERICA,
Appellant,
vs.
THE AUTOMATIC SCALE COMPANY,
Appellee.
No. 175.

BRIEF FOR APPELLANT.

MELVILLE CHURCH,
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BRIEF FOR APPELLANT.

This is a suit in equity brought by the plaintiff, The Computing Scale Company of America, a New Jersey corporation, against The Automatic Scale Company, a New Jersey corporation, having a regular and established place of business in the District of Columbia, for the infringement of letters patent No. 700,919, granted to the plaintiff as the assignee of the inventor, Austin B. Hayden, on the 27th day of May, 1902, upon an application filed September 8, 1899, for Improvements in Computing Scales. The bill, which is in the usual form, prays for an injunction and an accounting. The answer denies the patentability of the invention of plaintiff's patent, sets up the alleged prior invention of one Calvin F. Christopher and denies infringement.

The Supreme Court of the District of Columbia dismissed the bill for want of equity and the Court of Appeals for the District of Columbia affirmed that decree.

THE INVENTION.

The invention of the Hayden patent is an improvement in so-called Spring-Balance Computing Scales.

In ordinary spring-balance scales, such as are used by butchers in the markets, the pan upon which the article to be weighed is placed is suspended from a hook attached to a movable frame technically called the "runner," and this runner is, in turn, suspended by springs from a relatively stationary portion of the scale casing. On the front of the casing, alongside a vertical slot therein, graduations are applied representing pounds and ounces, and connected with the runner frame and projecting through the slot in front of the casing, is an index or pointer which is adapted to co-operate with the aforesaid graduations in the use of the scale.

The index or pointer stands normally at zero, and when an article to be weighed is placed in the scale-pan it causes the latter to be depressed and the runner to be pulled down with it, thereby overcoming, to a certain extent, the tension of the suspension springs and bringing the index or pointer opposite the particular graduation on the front of the scale which stands for the weight of the article being weighed. After the weight of the article has thus been ascertained, the price of it to the purchaser is determined by multiplying either mentally or by means of pencil and paper, the number of pounds indicated by the scale by the cost, per pound, of the article being sold.

In so-called, spring-balance computing scales, the parts of the apparatus are so contrived as to indicate, both to the salesman and to the purchaser, the value in dollars and cents, at any given price per pound, of the article put into the scale-pan.

In the computing scale of Hayden covered by the patent in suit there are employed (1) an external non-rotating

frame or drum adapted to be supported or suspended from its upper end, (2) weighing springs secured at their upper ends to the upper portion of this fixed drum, within the same, (3) a vertically movable runner suspended from the lower ends of said springs and provided with means to support the load or scale-pan beneath it, (4) a rotatable chart drum mounted within the non-rotatable frame or drum, on a vertical axis, and having external horizontal rows of value indicating figures, computed at different rates per pound, (5) a slot or aperture in the external non-rotatable frame or drum to enable portions of the value indicating rows on the inner rotatable chart drum to be seen, (6) rate indicating figures on the non-rotatable frame or drum alongside the slot therein, adjacent to the value indicating rows on the rotatable chart drum, (7) and mechanism for translating the vertical movements of the runner into rotary movements of the chart drum.

The particular means shown in the Hayden patent for translating the vertical motion of the runner into rotary motion of the chart drum consists of a spiral or screw formed upon a rod constituting a part of the runner and co-operating rollers mounted upon the lower portion of the chart drum, the action being such as that when the runner is pulled down against the tension of the springs the chart drum will be rotated in one direction, and when the runner returns or moves upward under the reaction of the springs the chart drum will be rotated in the opposite direction.

It is perfectly obvious, however, that, instead of employing this particular form of translating mechanism for converting the reciprocatory movements of the runner into rotary movements of the chart drum, other equivalent forms of translating mechanism might be employed, and the solicitors who prosecuted the Hayden application fully appreciating this, drew some of Hayden's claims so as to cover the employment of ANY sort of translating mechan-

ism—the form of mechanism embodying the use of the spiral rod and rollers as well as other forms—and they also drew other claims limited to cover, and to cover, only, the particular form of translating mechanism employing such spiral rod and rollers. Claims of the last named description, that is to say, those limited to translating devices employing the spiral or screw and the co-operating rollers, are claims 3, 4, 9, 10 and 11. None of them has been put in suit, for the very simple reason that the defendant is not shown to have used that particular form of translating device.

The claims, however, which were not intended to be, and are not, limited to any particular form of translating device, but which were intended to, and do, cover translating devices, broadly, as an element of the combinations stated, are the 1st, 2d, 6th, 7th, and 8th. In the 1st claim this element is characterized as "connecting means between rod and computing cylinder, whereby by longitudinal movement of the rod, rotary movement is imparted to said cylinder"; in the 2d claim, as "connecting means between said rod and computing cylinder whereby longitudinal movement of the rod produces rotary movement of the cylinder"; in the 6th, 7th, and 8th claims as "mechanism for translating the vertical movements of the runner into the rotary movements of the chart drum." These claims, 1, 2, 6, 7, and 8, have been put in issue, in this case, because, as we shall presently point out, they are broad enough to cover the translating devices employed by defendant.

ERRORS OF THE COURT BELOW.

1. The first error of the Court below of which we have to complain is the Court's assumption that, because Hayden, at one time in the prosecution of his application for patent made and then struck out certain claims, the claims finally

granted him are not available to him to suppress as infringements, the construction employed by the defendant.

It is undoubtedly true, as settled by many decisions of this court, that a patentee, having once made and stricken out a broad claim and having then accepted a narrower claim, is not to be heard to say, when he sues an alleged infringer on his narrow claim, that such claim should be given a breadth of construction commensurate with that of the broad claim which he relinquished.

But if an inventor presents a broad claim and strikes it out and then presents and obtains an equally broad claim he loses no right by such action, and may justly assert his allowed claim to be a broad one and restrain any one who infringes it.

So, too, if he makes and strikes out a broad claim and accepts a narrower one, the mere fact that he has once made and relinquished the broader claim does not prevent him from asserting the validity of the narrower claim as against any defendant who invades it. Plainly, even a narrow claim may be infringed.

The true doctrine, and the limitations of it, are admirably expressed in the opinion of this court in Hubbell vs. United States, 179 U. S. 77, as follows:

> "An examination of the history of the appellant's claim, as disclosed in the file wrapper and contents, shows that, in order to get his patent, he was compelled to accept one with a narrower claim than that contained in his original application; and it is well settled that the claim as allowed must be read and interpreted with reference to the rejected claim, and to the prior state of the art, and can not be so construed as to cover either what was rejected by the Patent Office or disclosed by prior devices. Leggett vs. Avery, 101 U. S. 256, 25 L. ed 865; Shepard vs. Carrigan, 116 U. S. 593, 29 L. ed. 723, 6 Sup. Ct. Rep. 493; Knapp vs. Morss, 150 U. S. 227, 37 L. ed. 1061, 14 Sup. Ct. Rep. 81.

> "It is quite true that, where the differences between the claim as made and as allowed, consist of mere changes of expression, having substantially the same meaning, such changes, made to meet the views of the examiners, ought not to be permitted to defeat a meritorious claimant. While not allowed to revive a rejected claim by a broad construction of the claim allowed, yet the patentee is entitled to a fair construction of the terms of his claim as actually granted."

Judge Lurton, speaking for the Circuit Court of Appeals for the Sixth Circuit, has said:

> "To be estopped by the action of the Patent Office, the patentee must be shown to have surrendered something which he now claims in order to obtain that which was allowed."
>
> Bunday Mfg. Co. vs. Detroit Time Reg. Co., 36 C. C. A. 375-394.

In the case at bar, Hayden presented the following as his original first claim (p. 150):

> "In a spring-balance computing scale, the combination of a suitably supported vertical non-rotatable casing provided with a price index, a vertical rotatable computing cylinder journaled in said casing, provided with cost computations, a spring supported load-pan supported from said casing, and means connected with said pan and cylinder for rotating the cylinder as the pan is lowered under pressure, substantially as and for the purposes set forth."

Certain patents were cited against this claim and the solicitors struck it out. But why? The reason is given in the record (p. 155).

> "These claims are cancelled, not because considered unallowable, but because it is not desired to prosecute

> an appeal, in view of the fact that the allowed claims appear to cover the invention as it will be constructed in practice. The cancellation is made, therefore, without prejudice to the claims which remain."

It appears, then, that the claim was striken out not because it was so broad, not because it was anticipated, but simply because the other claims were considered to fully cover the invention.

As a matter of fact, the claim striken out was, in some respects, narrower than those finally granted. It called for "a spring supported *load-pan* supported from said casing" and "means connected with said *pan* and cylinder for rotating the cylinder as the *pan* is lowered under pressure." Manifestly, this claim would not have been infringed by any machine in which a *load-pan* was not employed. Present claims 1 and 2 of the patent are not limited to a load-pan. They characterize the element to which the weight is applied, not as a "load-pan," but as a "spring supported load bearing and cylinder revolving *rod*." Present claim 6 is not limited to a "load-pan," but covers much broader ground, *i. e.*, " a vertically movable runner," "provided with *depending means* to support the load and 'mechanism for translating the vertical movements of the *runner* into the rotary movements of the chart drum.' " Present claims 7 and 8 are not limited to a "load-pan," but cover "a vertically movable *runner*" "provided at its lower end with *means* to support the load beneath it."

Furthermore, the element characterized in the erased claim as "means connected with said *pan* and cylinder for rotating the cylinder as the *pan* is lowered under pressure," is more broadly described in claim 1 of the patent, where it is characterized as "connecting means between rod and computing cylinder whereby, by longitudinal movement of the rod, rotary movement is imparted to said cylinder"; in claim 2 of the patent, where it is characterized as "connect-

ing means between said rod and computing cylinder whereby longitudinal movement of the rod produces rotary movement of the cylinder"; and in claims 6, 7, and 8 of the patent, where it is characterized as "mechanism for translating the vertical movement of the runner into the rotary movement of the chart drum."

The first grave error, therefore, of the Court below was in deciding that the claims actually granted to Hayden could not be given a construction as broad as the claim stricken out by him, nor a construction that was not limited to the precise form of translating mechanism illustrated in the patent, the facts being, as we have seen, that the claim stricken out was in some respects narrower than the claims actually granted, and that the claims granted and put in issue cover "translating devices," broadly, and were not intended to cover, only, and can not properly be construed to cover, only, the specific translating devices shown in the patent.

It of course makes no difference that the spirally grooved rod and the rollers of the Hayden patent are described as the preferred form of translating device. The fact that it is thus referred to as the preferred form indicates, plainly, that it was not considered the only form of translating device that might have been used.

In Sewall vs. Jones, 91 U. S., pp. 185, 186, the patentee had, in like manner, recommended a particular way of carrying out the broad invention; but this court said, (p. 185):

> "*This is not of the substance of the patent.* A recommendation is quite different from a requirement. The latter is a demand, an essential, a necessity. The former is a choice or preference between different modes or subjects, and is left to the pleasure or the judgment of the operator. He may adopt it. He will do well if he does. But he may reject it, and still accomplish his object by means of the patent."

And again, on p. 186:

> "Accordingly when the inventor says: 'I recommend the following method,' he does not thereby constitute such a method a portion of his patent. His patent may be infringed although the party does not follow his recommendation, but accomplishes the same end by another method."

In Holliday vs. Pickhard, 29 Fed. Rep., 853, Judge Wallace said (p. 858):

> "It is unfortunate that the claim can not be limited without violence to its language, and without disregarding well settled rules of construction, to one for the efficient process which is described as preferably to be employed. But a method or feature which is mentioned only by way of recommendation, in describing an invention, must generally be considered as a subordinate or secondary, and not an essential part of the invention, and, in the absence of apt language in the claim, it can not be read into the claim even to limit the claim to the real invention of the patentee."
>
> "Features of construction which the specification of a patent recommends or described as preferable, do not thereby become essential parts of the patent or limitations of the claims." ([C. C. A.] Smith vs Perkins & Co., 125 Fed., 288.)

Hayden was careful to make and secure claims that would cover specifically what he considered his preferred form of translating device. Claims 3, 4, 5, 9, 10 and 11, are limited, in terms, to this form. Such claims, however, have not been put in issue. The claims that have been put in issue, namely, claims 1, 2, 6, 7 and 8, are couched in much broader language, and include as well the preferred form of mechanism shown in the patent as other equivalent forms of translating mechanism, not shown. The defendant's translating mechanism, as we shall presently see, is a form not specific-

ally shown in the patent, but, nevertheless, is covered by the broader claims thereof.

Both broad claims and narrow claims must, if possible, be given effect and not construed to be alike.

In Bresnahan vs. Tripp Giant Leveller Co., 102 Fed., 899, 43 C. C. A., 48, the Circuit Court of Appeals for the First Circuit said:

> "The claims of a patent should be construed, where they reasonably may be, to cover the entire invention of the patentee; and where a patent contains several claims, some of which are limited to details, the others are, *prima facie,* not to be restricted, by insisting that they contain, as necessary elements, the particulars which are specifically covered elsewhere."

In Risdon Iron & Locomotive Works vs Trent, 92 Fed., 375, Judge Morrow said:

> "Infringement can not be avoided by reading into a broad claim of a patent specific devices claimed in narrower claims of the patent."
>
> See also Parsons vs. Seelye (C. C. A.), 100 Fed., 455.

2. The second error of the Court below is in assuming that the whole novelty of the Hayden invention, over the prior art consisted in the spirally grooved rod for giving rotary movement to the cylinder. Mr. Browne, complainant's expert, traces, with painstaking care, the development of the art of computing scales up to the date of the invention of the Hayden patent; shows how fairly good success had resulted from the use of horizontally arranged drums; how success had never attended the efforts of prior inventors to produce a scale in which the drums were vertically arranged; and, finally, how Mr. Hayden, by his clever combination of instrumentalities, covered, generically, by his

claims in issue, solved the problem and for the first time produced a spring computing scale in which it was possible to arrange the cylinders vertically with all the attendant advantages, such as compactness, economy of space, etc., etc., without loss of accuracy. We will not attempt to quote from Mr. Browne's deposition, but will ask the Court to read the whole of it and thus gain a clear idea of Mr. Hayden's true position in this particular art (p. 142).

Hayden did more than merely "stand on end" the scales with horizontal cylinders of the prior art. The problem to which Hayden addressed himself was not by any means so simple as that of merely turning the old horizontal scales upon end. The record shows that, for years, attempts had been made to produce scales in which the computing cylinders could be arranged vertically, but no progress was made. Scales with horizontally arranged cylinders had reached a fairly high degree of perfection, as shown in the Smith patent (p. 106) for instance; but these scales would not turn up on end and operate at all. It was desirable that scales of this sort should be arranged vertically, for in that position they would occupy very much less valuable space in a store, even if no other beneficial result would flow from the change. The truth is, however, that the problem required more than the mere turning up on end of the old scales. It required an entire reconstruction of the outer or fixed cylinder and its mode of suspension; it involved the problem of supporting the inner cylinder at one end on a vertical axis so that it could be properly turned within the outer cylinder; it involved the arranging of the runner and its springs within the cylinders; the securing of the springs to the outer cylinder; the rotating of the inner cylinder or chart drum, from the runner through suitable translating devices arranged within the cylinders; and it also involved an arrangement of the outer casing so that the operative parts of the mechanism within would be protected from injury and from access

of dust, etc. All this required invention, the kind of mental creation and adaptation which the law rewards. It is true that, as in like cases, some ideas were borrowed from the prior art, and things, not new in themselves, were appropriated and adapted. But the result was, a *new combination* and because some of the elements of the combination were old the merit of the combination, as such, was not thereby diminished. At the time Hayden entered the field great efforts were being made, by many inventors, to produce a spring computing scale of the vertical cylinder type. The record shows that Hayden was involved in at least two interferences, one, with an application of John W. Culmer, of Cleveland, and an application of Walter Stimpson, of Detroit, in respect of claim 7 of the patent in suit (here in issue,) and the other, with the application of one F. W. Finch, of Washington, D. C., in respect of claims 10 and 11 of the patent in suit (not here in issue,) and judgment of priority was rendered in his favor in each (pp. 167, 174, 184, 186). It seems that there was a third interference threatened but never declared. The office informed Hayden that if he would make the following claim an interference would probably be declared (p. 160):

> "In a device of the class described, the combination with two members, a vertical cylinder having graduations, and an indicator co-operating with said graduations, one of these members being revoluble with reference to the other about a vertical axis, of a weight receptacle operatively connected to impart rotation to the revoluble member, and a spring within the cylinder connected to the weight receptacle and tending to resist the depression of the latter."

He was advised by the office concerning this proposed interference, as follows (p. 160):

> "The part *b'* of applicant's device is regarded as an indicator, and if applicant sees fit to insert the sug-

> gested claim it would be well to describe the cross-hair *b'* as an indicator in this specification, say, by inserting after 'wire' in line 3 of page 3 of the specification, the words 'or indicator.' "

This sort of amendment did not suit Hayden and he didn't make it and the interference was never declared. He, of course, did not know who the alleged interferent was, nor did he know the construction of the alleged interferent's device. The defendant herein now advises us that the alleged interferent was one Calvin F. Christopher, whose application was filed March 20, 1900, and whose patent was issued September 25, 1900, as No. 658,732 (p. 135). The 8th claim of the Christopher patent is pointed out as embodying the subject-matter of the proposed interference, and defendant argues that because Hayden did not make the amendment suggested by the Office and bring on the interference with Christopher he and his assignees are now estopped from contending that the claims that were granted him, without an interference with Christopher, are susceptible of a construction broad enough to cover the defendant's device, though the latter is entirely unlike the device shown in the Christopher patent. It is hard to follow such a course of reasoning. We can only say, (1) that Hayden lost no rights by not making the claim suggested to him for interference; (2) that, never having made the claim suggested, his failure to make it was no relinquishment of it (3) that the claim suggested was predicated of Christopher's structure, which didn't show a *rotatable* chart cylinder, at all, but only a *swinging arm* moving around a *fixed chart cylinder*, under a glass case; (4) that Hayden's invention exhibited, and all his claims were limited to, a *rotary* chart cylinder contained within an *outer fixed* enclosing cylinder and there was, therefore, never any interference in fact between Hayden and Christopher; (5) that nothing that Hayden ever claimed interfered with the patented claim of Christo-

pher and if it had an interference would have been declared anyway, without further action on Hayden's part; (6) that if an interference had been declared between Hayden and Christopher, Hayden must have prevailed, because his application was filed September 8, 1899, more than six months prior to Christopher's date of filing; and (7) that, whether or not the claim allowed Christopher was one that might have been contested by Hayden is wholly immaterial, since the claims of Hayden, involved in this suit, are claims that Christopher could never have made, inasmuch as he didn't show in his application a revoluble chart drum co-operating with a stationary outer casing, and since the defendant does not use the Christopher construction, at all, but insists upon using a two-cylinder structure, answering precisely to the terms of the claims of the Hayden patent and covering an invention which only Hayden is shown to have made.

FURTHER REPLY TO THE ALLEGED INVALIDITY OF THE PATENT IN SUIT.

(*a*) The patent itself is *prima facie* evidence of both novelty and utility of the invention covered by it.

Lehnbeuter vs. Holthaus, 105 U. S., 94.

(*b*) Claims 1, 2, 6, 7 and 8 of the patent, being the ones put in issue and alleged to be infringed, are for combinations of instrumentalities designed to produce a new and useful result. Claims of this character are not to be held anticipated and declared invalid because some or all of the elements are, individually, old. The combination, as such, must be shown to be old. There is no anticipation unless all the elements are found in some prior structure, combined in the same way, to produce the same result.

In Imhaeuser vs. Buerk, 101 U. S., 647, this Court said (p. 660):

> "Where the thing patented is an entirety consisting of a single device or combination of old elements incapable of division or separate use, the respondent can not escape the charge of infringement by alleging or proving that a part of the entire invention is found in one prior patent, printed publication or machine, and another part in another prior exhibit, and still another part in a third exhibit; and from the three, or any greater number of such exhibits, draw the conclusion that the patentee is not the original and first inventor of the patented improvement."

In Parks vs. Boothe, 102 U. S., 96, this Court reiterated the above, and added (p. 104):

> "Common justice forbids such a defence, as it would work a virtual repeal of so much of the patent act as gives to inventors the right to a patent consisting of old elements where the combination itself is new and produces a new and useful result. New elements in such a patent are not required, and if such a defence were allowed, not one patent of the kind in a thousand of modern date could be held valid."

(c) Mr. Browne, plaintiff's expert, in his deposition given in rebuttal (pp. 141-146), separately considers the several patents relied upon as an anticipation of the Hayden invention and shows very clearly wherein each of them fails and the advantages of the Hayden combination over them all. A careful reading of the whole of his deposition is asked of the Court. To quote from it would be but to mutilate it.

(*d*) The fact that the application of Hayden was involved in several Patent Office interferences with several adverse claimants, and that Hayden was finally decided to be the prior inventor and entitled to his patent is, in itself, cogent evidence of the substantial merit of his improvement.

and of its appreciation by other inventors as well as himself.

(*e*) The persistent use by the defendant of the Hayden invention is also evidence of the value of his invention as well as good evidence that the structures of the prior art, which the defendant is free to use without let or hindrance on the part of the plaintiff, are not the equivalents or feasible substitutes for the Hayden invention.

(*f*) The invention of Hayden may not now, after the event, seem difficult of accomplishment. The defendant claim it was obvious; but this defence is one that the Courts have little patience with.

It is what Judge Sprague (6,775 Fed. Cases) calls "prophecy after the event," and what Judge Woodruff refers to (17,254 Fed. Cases) as "the wisdom which comes to an infringer" after he is made to face the penalties of the law.

Judge Curtis (Forbush vs. Cook, 4,931 Fed. Cases) referring to this subject, says:

> "Nor does the validity of a patent depend on an opinion formed after the event respecting the case or difficulty of attaining it."

Judge Swayne says, in Wood vs. Cleveland Rolling Mill, 17,941 Fed. Cases:

> "Whether the Colbroke machine could have been so modified as to do the work of the Kenyon machine, is not in these cases a subject of inquiry."

In the "wisdom which comes to an infringer" after he has been brought into court to answer for his unlawful acts, it is easy to go back to old, worthless prior machines and point out how they might have been changed to effect the same

important results. This proceeding is well stated by Mr. Justice Swayne, in Wood vs. Cleveland Rolling Mill (Ibid), in the following forcible and beautiful language:

> "In the fossils of geology belonging to certain classes of animals, regular graduations from a low form of organism to a much higher one are found to exist. The contrast between the highest and the lowest is very striking. The same thing takes place in the progress of inventions. Models and machines in the same series, upon inspection not unfrequently exhibit curious points of analogy to such fossils. Sometimes one will be found to reach almost the highest point afterwards attained, but to fall short of it.
>
> "The difference is that between success and failure.
>
> "When a great success is achieved in the field of mechanical invention and the higher organism is protected by a patent, it is almost as certain that invasion will follow, as that there exists the relation of cause and effect. Such is the voice of universal experience.
>
> "When the infringer is called to account, one of two defenses is usually set up, and frequently both. First, that the invention in one of the lower grades is substantially the same with that of the patentee. The confidence of the attacking witnesses is often in proportion to the distance in the time that one is removed from the other."

In Graham vs. Plano Manufg. Co., 32 Fed., 917, Judge Blodgett said (p. 918):

> "In regard to all the testimony in this case illustrating the state of the art to which the complainant's invention belong both that which had been passed upon in former cases and that which is brought forward for the first time in this case, it may be said that a review of this proof in the light of what Graham did, shows that several inventors, who preceded him in point of time, groped about, or approximated to his device, and it is now comparatively easy, with the Graham machine

before us, to make a Graham machine out of several of these older efforts in that direction; but the fact seems to me to remain unshaken, by the proof in this case, as it did in the former cases, that none of them accomplished the result obtained by this invention or made a machine organized and intended to secure that result by the means which he adopted and described. In other words, Graham seems to me to have been the first to embody, in a practical working machine, the device covered by his patent. A mere mechanic, with a Graham machine before him, may, without invention, now so alter and improve some of the clumsy attempts at the same object in the older art as to make these machines do what Graham's machine does, but they need the instructor of the Graham device to make these old machines a success. Graham achieved success, while his predecessors in the field had failed."

In Palmer vs. Johnston, 34 Fed., 336, Judge Wallace said (p. 337):

"Cowell's improvement is a very simple one, and it is easy to assert now that any competent mechanic in the department of industry could have made it by the exercise of ordinary mechanical skill. Indeed, it seems surprising now that no one had made it; but no one had, although many kinds of pulley boxes had been made and some had been patented; and as soon as this one was made and introduced its advantages were manifest, and it commended itself to the public as a practical and desirable device, and a better one than those which had preceded it. These circumstances afford a safer criterion of inventive novelty than any subsequent opinion of an expert or intuition of a judge."

In Stegner vs. Blake, 36 Fed., 183, Judge Wheeler said (p. 185):

"This improvement is said in argument to have been so obvious that any skilled workman in the trade could

have accomplished it, and to fall short of anything patentable as an invention. Now it has been done, and the manner of doing it has been seen, it seems to be very easy and simple; but before it had been done it had to be thought of and contrived. That it became so useful is good evidence that it was wanted; and that the old kind was used so long, and by so many workmen without seeing the advantages of this and adopting them, is strong evidence that something more than the skill of an ordinary workman was necessary to bring this out. A consideration of all this tends to the conclusion that more than mechanical skill, amounting to an exercise of creative and inventive faculties, was involved, and that the defense of want of patentability is not sustained."

In Gould Coupler Co. vs. Pratt, 70 Fed., 622, Judge Coxe said (p. 624):

"He is attacked on the old lines. The accusation against him is one that every inventor must meet. The moment the solution of the problem is made plain, those who did not see it seek to belittle the achievement of the one man who did see it by the assertion that it was so exceedingly obvious and simple as to exclude the possibility of a demand upon the inventive faculties. This will not do. An invention does not cease to be meritorious because it is simple. Many of the greatest inventions are most simple. The test should be not whether the mechanism is simple or complex, but whether the patentee has given the world something new; whether the public is richer for his contribution to the art; whether he has produced novel and beneficial results. Invention should be determined more by an ascertainment of what the inventor has actually accomplished than by a technical analysis of the means by which the result is attained."

THE ALLEGED PRIOR INVENTION OF CALVIN F. CHRISTOPHER.

To the defence of the alleged prior invention of Calvin F. Christopher we reply—

(*a*) The device alleged to have been made by Christopher at some indefinite time prior to 1898 is not produced, nor is any of its parts, in its original form, now in existence. The pieces that have been produced are not well identified and have admittedly been changed in material respects since they are alleged to have been first constructed. As Christopher himself testifies, the device was a mere experimental model (Christopher, Q. 31, p. 20); only made to demonstrate whether the idea was practical (Q. 36, p. 20); only one model was made (X-Q. 41; p. 64); Christopher was not entirely satisfied with it (X-Q. 44, p. 64); pulled it to pieces to utilize its parts for other purposes (X-Q. 39, p. 64; Q. 19, p. 60); laid it aside for his horizontal scale, because he preferred the latter (X-Q. 42, p. 64); patented the horizontal scale, but failed to patent the device in question.

It is clear, from the whole history of the device, that it was experimental, tentative, unsatisfactory, unworthy of preservation, not thought of sufficient utility to warrant patenting, and that it was in every sense an abandonded experiment.

Moreover, the testimony respecting the existence and identity of the device and its date of production is loose, contradictory and unsatisfactory, and by no means rises to the measure of proof *convincing beyond a reasonable doubt* required under the authorities to overcome a patent.

In civil causes, almost without exception, the issues may be proved by a fair preponderance of evidence, but in patent causes, where the issue is priority of invention or prior use, proof convincing beyond a reasonable doubt is required.

The rule requiring proof of so high a grade is the outgrowth of necessity, evidence of alleged priority of invention

having been found so easy to manufacture and so difficult to overthrow, and there being such liability of even honest witnesses to err as to the identity of mechanical structures or chemical processes, as well as to the dates of their production.

Coffin vs. Ogden, 18 Wall., 120;
Cantrell vs. Wallick, 117 U. S., 689;
Barbed Wire Patent, 143 U. S., 275;
Deering vs. Harvester Works, 155 U. S., 286.

(*b*) If the testimony of Christopher and his witnesses is to be believed, the mere circumstance that a model was constructed and operated to test its action, and that it performed its functions in a more or less satisfactory manner, is not proof of a complete invention, in the eye of the law, since the circumstances indicate that the use was merely experimental, and that the progress of development was arrested and never carried to a point to produce anything of practical utility.

The general rule is thus stated by this Court in Coffin vs. Ogden, 18 Wall., 120:

> "The invention relied upon as a defense must have been complete and capable of producing the result sought to be accomplished, and this must be shown by the defendant * * *
>
> "If the thing were embryotic or inchoate; if it rested in speculation or experiment; if the process pursued for its development had failed to reach the point of consummation, it can not avail to defeat a patent founded upon a discovery or invention which was completed, while in the other case there was only progress, however nearly that progress may have approximated to the end in view. The law requires not conjecture, but certainty. If the question relates to a machine, the conception must have been clothed in substantial forms which demonstrate at once its *practical efficiency and utility.*"

That the mere clothing of the conception in substantial form does not, in itself, demonstrate its practical efficacy and utility, and thus establish the fact of complete invention, is determined by this Court in Seymour vs. Osborne (11 Wall., 516). One of the defenses set up and relied upon in that case was the prior invention of Hussey, and the circumstances which led the court to disregard the defense as founded upon evidence of an incomplete and abandoned experiment are so similar to those presented here that we feel justified in quoting the findings of the court.

Mr. Justice Clifford, delivering the opinion of the court, says, concerning what is denominated the "experimental machine" of Hussey's:

> "Some obscurity surrounds its early history, nor is it of much importance that it should be better known. It appears that it was sent to the railroad depot to be transported to some other place for trial, but there is no positive evidence that it was ever forwarded or used, or that it was capable of any beneficial use. Where it was transported, if at all, from the depot does not appear; but it does appear that it was returned the next year to the shop of the maker, and that it was set against the wall by the side of the street in front of the shop, where it remained for some time; that it was then removed to the new shop of the maker, where it remained until it was taken to pieces and broken up by his order, and never restored till long subsequent to the complainant's patent.
>
> Original and first inventors are entitled to the benefit of their inventions if they reduce them to practice and seasonably comply with the requirements of the patent law in procuring letters patent for the protection of their exclusive rights. Crude and imperfect experiments are not sufficient to confer a right to a patent; but in order to constitute an invention the party must have proceeded so far as to have reduced his idea to practice and embodied it in some distinct form.
>
> Desertion of an invention, consisting of a machine

never patented, may be proved by showing that the inventor, after he had constructed it and before he had reduced it to practice, broke it up as something requiring more thought and experiment, and laid the parts aside as incomplete, provided it appears those acts were done without any definite intention of resuming his experiments and of restoring the machine with a view to apply for letters patent."

In Brown vs. Guild, 23 Wall., 181, is found another example of the construction of a machine, which was held to be an abandoned experiment and not a complete invention. Mr. Justice Bradley, speaking for the Court, and referring to said machine, says:

> "If upon the whole of the evidence it appears that the alleged prior invention or discovery was only an experiment and was never perfected or brought into actual use, but was abandoned and never revived by the alleged inventor, the mere fact of having unsuccessfully applied for a patent therefor can not take the case out of the category of unsuccessful experiments.

In the American Wood Paper Co. vs. The Fibre Disintegrating Co., 23 Wall., 566, Mr. Justice Strong, in delivering the opinion of the court, uses the following language:

> "It is freely admitted that the patent of an originator of a complete and successful invention can not be avoided by proof of any number of incomplete and imperfect experiments made by others at an earlier date. This is true though the experimenters may have had the idea of the invention, and may have made partially successful efforts to embody it in a practical form."

Both the completion of an invention and the prosecution of what are characterized as abandoned experiments involve the construction and trial of a machine or structure including all the elements of the invention, but they differ radically

in legal effect, the one operating to confirm the title of the inventor and the other to negative his claim to having made an invention.

An abandoned experiment, as the name implies, involves an attempt, more or less successful to produce a practically successful embodiment of the invention, followed by a failure to fully accomplish the purpose had in view and the abandonment of the subject-matter and its further development until after a more successful rival has succeeded in doing what the claimant attempted, but failed to accomplish.

The operations of Christopher come within the condemnation of all the authorities and can not militate against the claims of inventorship of one who, like Hayden, has not left the problem unsolved, but has brought his invention to a state of perfection and has taken all the steps required by the law to protect that invention by patent.

The Court below held that the Christopher defense had not been made out (p. 203).

INFRINGEMENT.

If this Court agrees with us that the patent in suit is a valid patent it will have no difficulty in coming to the conclusion that the defendant has infringed it. It is only necessary for the Court to read the claims of the patent, with the defendant's machine before it, to appreciate how aptly the claims describe the latter. It is true that the defendant does not use the particular means for translating motion described in the Hayden patent as the patentee's *preferred* form, but it does use what is clearly the mechanical e[illegible]valent thereof and a form that is indubitably covered b[illegible] the broad terms employed in the claims. That the two for[illegible]s of translating devices are the mechanical equivalents of each other the expert for the defendant does not deny.

The comparison which complainant's expert, Mr. Browne, makes between the two machines is entirely convincing of their substantial identity and need not be here repeated (pp. 13-16).

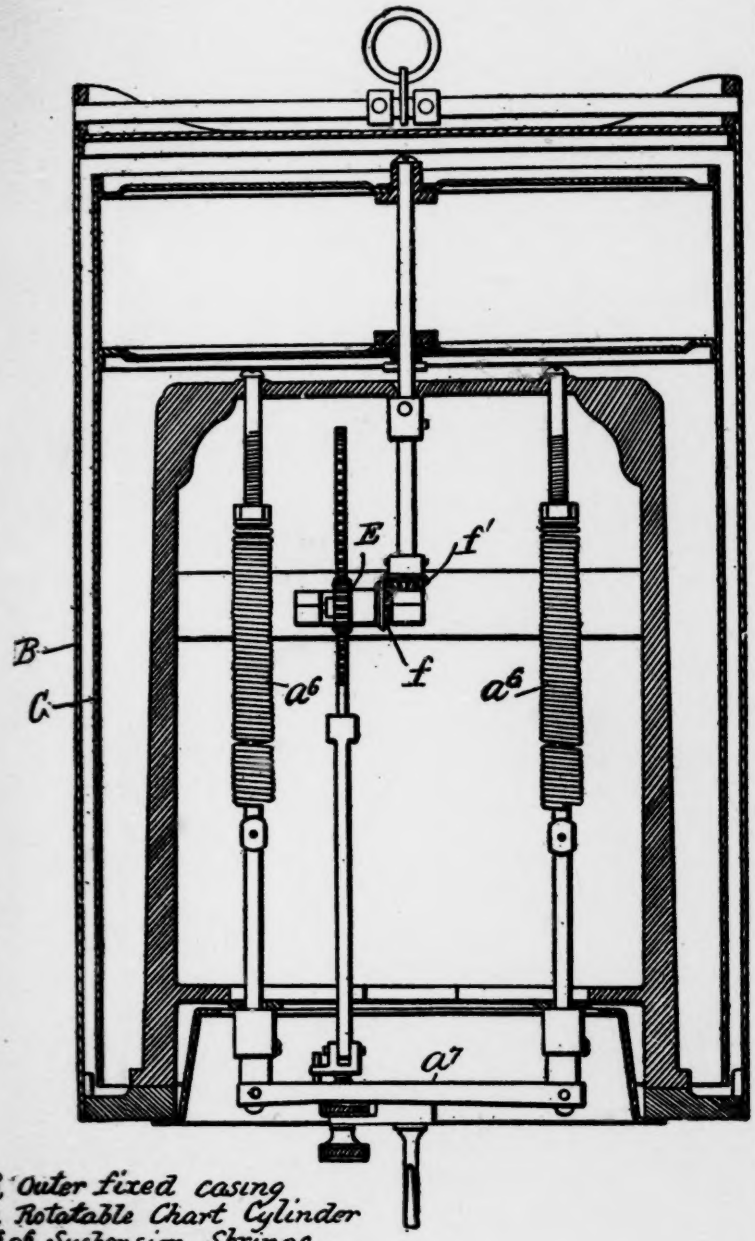
The Court below held that "If the claims are valid and can be taken at their face value, they are clearly infringed" (p. 203).

CONCLUSION.

The patent in suit being for a meritorious invention; the claims of it put in issue being of a sufficiently generic character to include the defendant's device; there being nothing in the record of the proceedings leading up to the grant of the patent, nor in the prior art, requiring the claims to be construed to cover less than their plain terms justify; and infringement being clear; the decree below should be reversed, with directions to enter a decree sustaining the patent, and awarding an injunction and an account.

MELVILLE CHURCH,
JOSEPH B. CHURCH,
Of Counsel for Appellant.

January 16, 1907.



B, Outer fixed casing
C, Rotatable Chart Cylinder
a^6 a^6 Suspension Springs
a^7 Vertically movable runner
E, f, f' Translating devices